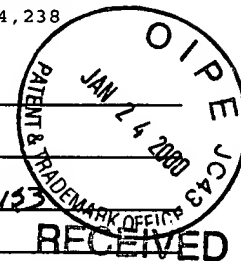


INFORMATION DISCLOSURE STATEMENT  
(Use several sheets if necessary)APPLICANT:  
Lester F. Ludwig, et al.FILING DATE  
June 7, 1996

GROUP

2219 2133



## U.S. PATENT DOCUMENTS

RECEIVED

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	P1	4,475,193	10/02/84	Brown			JAN 28 2000
	P2	4,796,293	01/03/89	Blinken et al.			Group 2700
	P3	4,888,795	12/19/89	Ando et al.			
	P4	4,998,243	03/05/91	Kao			
	P5	5,056,136	10/08/91	Smith			
	P6	5,073,926	12/17/91	Suzuki et al.			
	P7	5,157,491	10/20/92	Kassatly			
	P8	5,195,087	03/16/93	Bennett et al.			
	P9	5,231,492	07/27/93	Dangi et al.			
	P10	5,319,795	07/07/94	Hamabe et al.			
	P11	5,333,133	07/26/94	Andrews et al.			
	P12	5,335,321	08/02/94	Harney et al.			
	P13	5,345,258	09/06/94	Matsubara et al.			
	P14	5,367,629	11/22/94	Chu et al.			
	P15	5,375,068	12/20/94	Palmer et al.			
	P16	5,384,598	01/24/95	Rodriguez et al.			
	P17	5,384,772	01/24/95	Marshall			

EXAMINER

D. D/M

DATE CONSIDERED

8-7-00

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformation and not considered. Include a copy of this form with the next communication to applicant.

INFORMATION DISCLOSURE STATEMENT  
(Use several sheets if necessary)

APPLICANT:  
Lester F. Ludwig, et al.

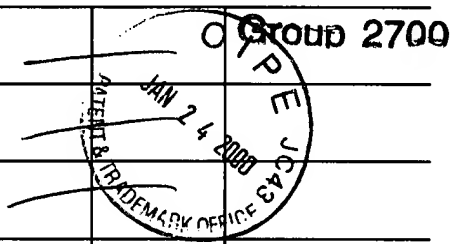
FILING DATE  
June 7, 1996

GROUP  
2317

RECEIVED

253  
JAN 28 2000

P18	5,392,223	02/21/95	Caci			
P19	5,422,883	06/06/95	Hauris et al.			
P20	5,475,421	12/12/95	Palmer et al.			
P21	5,506,954	04/09/96	Arshi et al.			
P22	5,565,910	10/15/96	Rowse et al.			



FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
F1							

OTHER PUBLICATIONS (including Author, Title, Date, Pertinent Pages, Etc.)

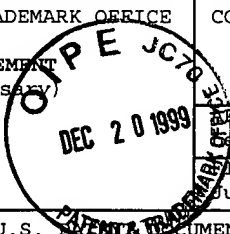
D1	

EXAMINER D. PINK	DATE CONSIDERED 2-7-00
---------------------	---------------------------

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformation and not considered. Include a copy of this form with the next communication to applicant.

RECEIVED

DEC 21 1999

INFORMATION DISCLOSURE STATEMENT  
(Use several sheets if necessary)APPLICANT:  
Gester F. Ludwig, et al.FILING DATE  
June 7, 1996Group 2700  
2/53

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
<i>[initials]</i>	P1	3,723,653	3/27/73	Tatsuzawa			
	P2	3,873,771	3/25/75	Kleinerman, et al.			
	P3	3,974,337	8/10/76	Tatsuzawa			
	P4	4,005,265	1/25/77	Verhoeckx, et al.			
	P5	4,054,908	10/18/77	Poirier et al.			
	P6	4,210,927	7/1/80	Yumde, et al.			
	P7	4,441,180	4/3/84	Schussler, et al.			
	P8	4,451,705	05/29/84	Burke et al.			
	P9	4,516,156	5/7/85	Fabris, et al.			
	P10	4,529,839	7/16/85	Colton, et al.			
	P11	4,529,840	7/16/85	Colton, et al.			
	P12	4,531,024	7/23/85	Colton, et al.			
	P13	4,574,374	3/4/86	Scordo			
	P14	4,645,872	2/24/87	Pressman, et al.			
	P15	4,650,929	3/17/87	Boerger, et al.			
<i>[initials]</i>	P16	4,653,090	03/24/87	Hayden			

EXAMINER

D. D. M

DATE CONSIDERED

2-7-00

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformation and not considered. Include a copy of this form with the next communication to applicant.

INFORMATION DISCLOSURE STATEMENT  
(Use several sheets if necessary)APPLICANT:  
Lester F. Ludwig, et al.FILING DATE  
June 7, 1996GROUP  
~~2317~~ 2153

8	P17	4,686,698	8/11/87	Tompkins et al.	RECEIVED	
	P18	4,710,917	12/1/87	Tomkins, et al.	DEC 21 1999	
	P19	4,716,585	12/29/87	Tompkins et al.	Group 2700	
	P20	4,817,018	03/28/89	Cree et al.		
	P21	4,837,798	6/6/89	Cohen, et al.		
	P22	4,847,829	07/11/89	Tompkins et al.		
	P23	4,922,523	5/1/90	Hashimoto		
	P24	4,931,872	06/05/90	Stoddard et al.		
	P25	4,953,159	8/28/90	Hayden et al.		
	P26	4,961,211	10/2/90	Tsugane, et al.		
	P27	4,965,819	10/23/90	Kannes		
	P28	4,977,520	12/11/90	McGauhey et al.		
	P29	4,987,492	1/22/91	Stults, et al.		
	P30	4,995,071	2/19/91	Weber, et al.		
	P31	5,003,532	3/26/91	Ashida, et al.		
	P32	5,010,399	4/23/91	Goodman, et al.		
	P33	5,014,267	5/7/91	Tompkins et al.		
D	P34	5,027,400	6/25/91	Baji, et al.		

EXAMINER

D D/M

DATE CONSIDERED

2-7-00

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformation and not considered. Include a copy of this form with the next communication to applicant.

INFORMATION DISCLOSURE STATEMENT  
(Use several sheets if necessary)

APPLICANT:

Lester F. Ludwig, et al.

FILING DATE

June 7, 1996

GROUP

2317 2153

RECEIVED

DEC 20 1999

PATENT &amp; TRADEMARK OFFICE

DEC 21 1999

Group 2700

P35	5,042,062	8/20/91	Lee		
P36	5,072,442	12/10/91	Todd		
P37	5,099,510	3/24/92	Blinken, Jr., et al.		
P38	5,130,399	07/14/92	Ikeno et al.		
P39	5,130,793	7/14/92	Bordry, et al.		
P40	5,130,801	7/14/92	Yamaguchi		
P41	5,155,761	10/13/92	Hammond		
P42	5,170,427	12/8/92	Guichard, et al.		
P43	5,195,086	03/16/93	Baumgartner et al.		
P44	5,200,989	4/6/93	Milone		
P45	5,202,957	4/13/93	Serrao		
P46	5,218,627	6/8/93	Corey, et al.		
P47	5,224,094	06/29/93	Maher et al.		
P48	5,239,466	08/24/93	Morgan et al.		
P49	5,253,362	10/12/93	Nolan et al.		
P50	5,260,941	11/09/93	Wilder et al.		
P51	5,283,637	2/1/94	Goolcharan		
P52	5,303,343	04/12/94	Ohya et al.		

EXAMINER

D. DNM

DATE CONSIDERED

27-00

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformation and not considered. Include a copy of this form with the next communication to applicant.

INFORMATION DISCLOSURE STATEMENT  
(Use several sheets if necessary)APPLICANT:  
Lester F. Ludwig, et al.  
FILING DATE  
June 7, 1996GROUP  
2217 2153

RECEIVED

DEC 21 1999

Group 2700

P53	5,333,299	07/26/94	Koval et al.			
P54	5,351,276	09/27/94	Doll Jr. et al.			
P55	5,353,398	10/4/94	Kitahara et al.			
P56	5,363,507	11/08/94	Nakayama et al.			
P57	5,365,265	11/94	Shibata et al.			
P58	5,373,549	12/13/94	Bales et al.			
P59	5,374,952	12/20/94	Flohr			
P60	5,379,374	01/03/95	Ishizaki et al.			
P61	5,382,972	1/17/95	Kannes			
P62	5,392,346	2/21/95	Hassler et al.			
P63	5,404,435	04/04/95	Rosenbaum			
P64	5,408,662	04/18/95	Katsurabayashi			
P65	5,432,525	07/11/95	Maruo et al.			
P66	5,444,476	8/22/95	Conway			
P67	5,471,318	11/28/95	Ahuja et al.			
P68	5,473,679	12/05/95	La Porta et al.			
P69	5,485,504	1/16/96	Ohnsorge			
P70	5,491,695	02/13/96	Meagher et al.			

EXAMINER

D DNM

DATE CONSIDERED

2-7-00

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformation and not considered. Include a copy of this form with the next communication to applicant.

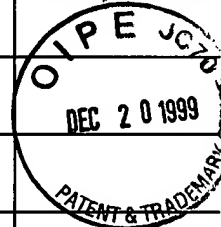
INFORMATION DISCLOSURE STATEMENT  
(Use several sheets if necessary)APPLICANT:  
Lester F. Ludwig, et al.  
FILING DATE  
June 7, 1996

RECEIVED

GROUP  
2117 DEC 21 1999

2	P71	5,515,491	5/7/96	Bates et al.				
	P72	5,526,024	6/11/96	Gaglianello et al.				
	P73	5,550,966	08/27/96	Drake et al.				
	P74	5,553,222	09/03/96	Milne et al.				
	P75	5,561,736	10/1/96	Moore et al.				
	P76	5,581,702	12/03/96	McArdle				
	P77	5,590,128	12/31/96	Maloney et al.				
	P78	5,594,495	01/14/97	Palmer et al.				
	P79	5,602,580	2/11/97	Tseng				
	P80	5,608,653	03/04/97	Palmer et al.				
2	P81	5,689,553	11/18/97	Ahuja et al.				

Group 2700



## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
2	F1	0 041 902	16 Dec '81	EP				
2	F2	0 190 060	6 Aug '86	EP				
2	F3	0 354 370	14 Feb '90	EP				
2	F4	35 07 152	29 Aug '85	DE				

EXAMINER

DATE CONSIDERED

D DIMM

2-7-00

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformation and not considered. Include a copy of this form with the next communication to applicant.

INFORMATION DISCLOSURE STATEMENT  
(Use several sheets if necessary)

RECEIVED

APPLICANT:

Lester F. Ludwig, et al.

FILING DATE

June 7, 1996

GROUP

2153  
Group 2700

F5	0 403 118	19 Dec '90	EP				
F6	0 414 222	27 Feb '91	EP				
F7	0 436 345	10 Jul '91	EP				
F8	0 453 128	23 Oct '91	EP				
F9	0 497 022	5 Aug '92	EP				
F10	0 516 371	2 Dec '92	EP				
F11	0 523 618	20 Jan '93	EP				
F12	0 535 601	07 Apr '93	EP				
F13	0 523 626	20 Jan '93	EP				
F14	0 548 597	30 Jun '93	EP				
F15	0 561 381	22 Sep '93	EP				
F16	0 604 053	29 Jun '94	EP				
F17	WO 94/24803	27 Oct '94	PCT				
F18	WO 92/21211	26 Nov '92	PCT				
F19							

OTHER PUBLICATIONS (including Author, Title, Date, Pertinent Pages, Etc.)

D1	ACM Press, Conference on Organizational Computing Systems, SIGOIS Bulletin, Vol. 12, No. 2-3, Nov 5-8, 1991
----	---

EXAMINER

DATE CONSIDERED

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformation and not considered. Include a copy of this form with the next communication to applicant.



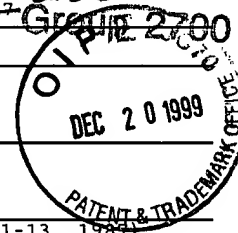
INFORMATION DISCLOSURE STATEMENT  
(Use several sheets if necessary)

RECEIVED

APPLICANT:  
Lester F. Ludwig, et al.  
FILING DATE  
June 7, 1996GROUP  
2153  
2317

DEC 21 1999

DEC 20 1999



D2	The American Users Forum (Niu-Forum) Aug 6-9, 1990
D3	Bellcore News, "IMAL Makes Media Merging Magic," 5(20), Nov 9, 1988
D4	Frontiers in computer communications technology, Sigcom '87 Workshop (Aug 11-13, 1987)
D5	Statement by Attorney for Applicants-Describing Product Development
D6	AHUJA et al., "Coordination and Control of Multimedia Conferencing," IEEE Communication Magazine, 30(5): 38-42, May 1992
D7	AHUJA et al., "Networking Requirements of the Rapport Multimedia Conferencing System," INFOCOM '88, IEEE, pp. 746-751, 1988
D8	COHEN et al., "Audio Windows: User Interfaces for Manipulating Virtual Acoustic Environments," pp. 479-480
D9	COHEN et al., "Audio Windows for Binaural Telecommunication," EIC, Tokyo (10/91)
D10	COHEN et al., "Design and Control of Shared Conferencing Environments for Audio Telecommunication," Proceedings of the Second Int'l Symposium on Measurement and Control Robotics (ISMCR '92), Tsukuba Science City, Japan, (November 15-19, 1992), pp. 405-412
D11	COHEN et al., "Exocentric Control of Audio Imaging in Biaural Telecommunication," IEICE Trans. Fundamentals, Vol. E75-A, No. 2, (February 1992)
D12	COHEN et al., "Multidimensional Audio Window Management," Int'l Journal of Man-Machine Studie, Vol. 34:319-336 (1991)
D13	COHEN et al., "Multidimensional Audio Windows: Conferences, Concerts and Cocktails," Human Factors Society Meeting, SF, CA, pp. 1-15, June-12-91
D14	ENSOR et al., "The Rapport Multimedia Conferencing System - Software Overview," Computer Workstation Conference, IEEE, pp. 52-58, 1988
D15	GOPAL et al., "Directories of Networks with Causally Connected Users," IEEE, pp. 1060-1064, 1988
D16	HORN et al., "An ISDN Multimedia Conference Bridge," TENCON '90 - 1990 IEEE Region 10 Conference on Computer and Communication, pp. 853-856, 1990
D17	KAMEL, "An Integrated Approach to Share Synchronous Groupware Workspaces," IEEE 1993
D18	KENDALL et al., "Simulating the Cue of Spatial Hearing in Natural Environments," Northwestern University, Evanston, IL 60201

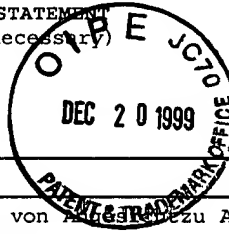
EXAMINER

DATE CONSIDERED

D DMM

21-00

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformation and not considered. Include a copy of this form with the next communication to applicant.

INFORMATION DISCLOSURE STATEMENT  
(Use several sheets if necessary)

RECEIVED

APPLICANT:  
Lester F. Ludwig, et al.  
FILING DATE  
June 7, 1996GROUP  
2317DEC 21 1999  
253  
Group 2700

D19	KLEIN, Telekommunikation von Angesehen zu Angesicht 2323 Telcom Report 9 (1986) Sept./Okt., No. 5, Erlangen, W. Germany
D20	KOBAYASHI et al., "Development and Trial Operation of Video Teleconference System," IEEE Globecom, pp. 2060-2063, 1999
D21	LAKE et al. "A network environment for studying multimedia network architecture and control," (1989 Globecom)
D22	LANTZ, An Experiment in Integrated Multimedia Conferencing, Department of Computer Science, Stanford University, Stanford, CA 94305, Dec 1986
D23	LANTZ et al., Collaboration Technology Research at Olivetti Research California, August 1989
D24	LAUWERS et al., Replicated Architectures for Shared Window Systems: A Critique, (Olivetti Research California) Version of April 1990
D25	LAUWERS et al., Collaboration Awareness in Support of Collaboration Transparency: Requirements for the Next Generation of Shared Windows Systems, (Olivetti Research California) Version of April 1989
D26	LEUNG et al., Optimum Connection Paths for a Class of Videoconferences, Department of Information Engineering, the Chinese University of Honk Kong, Shatin, Hong Kong
D27	MAENO et al., Distributed Desktop Conferencing System (MERMAID) Based on Group Communication Architecture, The Transactions of the Institute of Electronics, Information and Comm. Engineers E74 (1991) Sept., No. 9, Tokyo, JP
D28	MARTENS, "Principal Components Analysis and Resynthesis of Spectral Cues to Perceived Direction," Proceedings of the 1987 Int'l Computer Music Conference, Northwestern University, Evanston, IL 60201
D29	MASAKI et al., "A Desktop Teleconferencing Terminal Based on B-ISDN: PMTC," NTT Review, 4(4):81-85, 1992
D30	NG et al., Systems Integration '90, (April 23-26, 1990)
D31	NUNOKAWA et al., "Teleconferencing Using Stereo Voice and Electronic OHP," IEEE, 1988
D32	OHMORI et al., "Distributed Cooperative Control for Sharing Applications Based on Multiparty and Multimedia Desktop Conferencing System," IEEE, 1992
D33	PATE, "Trends in Multimedia Applications and the Network Models to Support Them," Globecom's 90: 1990
D34	PERKINS, "Spider: An investigation in collaborative technologies and their effects on network performance"
D35	RAMANATHAN et al., Optimal Communication Architecturs for Multimedia Conferencing in Distributed Systems, Multimedia Laboratory Dept. of Computer Science and Engineering, University of San Diego, La Jolla, CA
D36	RANGAN et al., "Software architecture for integration of video services in the etherphone system," IEEE J. on Selected Areas in Comm., 9(9):1395-1404, Dec '91
D37	RANGAN et al., "A Window-Based Editor for Digital Video and Audio," System Sciences, 1992 Hawaii Int'l Conference (1992)

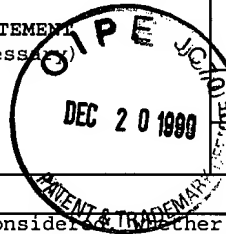
EXAMINER

D01/M

DATE CONSIDERED

2-7-00

INFORMATION DISCLOSURE STATEMENT  
(Use several sheets if necessary)



RECEIVED

APPLICANT:  
Lester F. Ludwig, et al.  
FILING DATE  
June 7, 1996

GROUP  
2317

DEC 21 1999  
2153  
Group 2700

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformation and not considered. Include a copy of this form with the next communication to applicant.

2	D38	SAKATA, "B-ISDN Multimedia Workstation Architecture," IEEE, 1993
	D39	SAKATA et al., "Development and Evaluation of an In-House Multimedia Desktop Conference System," NEC Research & Development, no. 98, pp. 107-117, July 1990
	D40	STEFIK et al., "Beyond the Chalkboard: Computer Support for Collaboration and Problem Solving," Communications of the ACM, Vol. 30, No. 1, Jan 1987
	D41	VIN et al., Hierarchical Conferencing Architectures for Inter-Group Multimedia Collaboration, Multimedia Laboratory Department of Computer Science and Engineering University of California at San Diego, La Jolla
	D42	VIN et al., Multimedia Conferencing in the Etherphone Environment, Computer Magazine, Vol. 24, Issue 10, pp. 69-79, 1991
	D43	WATABE et al., "A Distributed Multiparty Desktop Conferencing System and Its Architecture," IEEE, 1991
	D44	WATABE et al., "Distributed Desktop Conferencing System with Multiuser Multimedia Interface," IEEE, 1991
3	D45	WEISS, Desk Top Video Conferencing - An Important Feature of Future Visual, SIEMENS AG - Munich - West Germany
	D46	ZELLWEGER et al., "An Overview of the Etherphone System and Its Applications," Computer Workstations Conference, 1988
	D47	

EXAMINER

P. DINH

DATE CONSIDERED

2-7-99

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformation and not considered. Include a copy of this form with the next communication to applicant.